VOLUME 3. Air Operator Technical Administration

CHAPTER 10. EMERGENCY EVACUATION AND DITCHING DEMONSTRATIONS

SECTION 7. MAXIMUM PASSENGER SEATING CAPACITY FOR AIRPLANES USED IN PART 121 OPERATIONS

1765. TABLE OF MAXIMUM DEMONSTRATED SEATING CAPACITIES. The maximum number of passenger seats for specific air transport category airplanes used in Title 14 of the Code of Federal Regulations (14 CFR) part 121 operations are listed in table 3.10.7.1. This table must be used by flight standards field inspectors to determine whether a full-scale or a partial aborted takeoff demonstration is required. This list is to be considered the primary source document for flight standards inspectors when determining maximum seating capacities. Any question or information that differs from the data provided in this list shall be brought to the attention of AFS-200. These numbers have been derived from the following:

- Full-scale aborted takeoff emergency evacuation demonstrations
- An approved analysis for a seating capacity up to five percent more than that which was previously demonstrated from full-scale demonstrations
- As a result of previous (now superseded) regulations and exemptions

1766. - 1770. RESERVED.

TABLE 3.10.7.1: MAXIMUM APPROVED PASSENGER SEATING CAPACITY FOR TRANSPORT CATEGORY AIRPLANES TYPICALLY USED IN AIR CARRIER SERVICE

AIRPLANE MANUFACTURER AND MODEL	PAX[1] CAP.	EXIT CONFIGURATION	METHOD[2] OF COMPLIANCE	NOTES ON[3] SPECIAL FEATURES
AEROSPATIALE				
ATR 42-200/300/320	48*	One paired Type I and One paired Type III exits	Demo	Greater than 46 requires incorporation of modification 0481 (TCDS A53EU)
ATR 42-200/300/320	34*	One paired Type I exit	Demo	In combi configuration with applicable modifications (TCDS A53EU)
ATR 42-500	60*	One paired Type I and One paired Type III exits	Demo	
ATR 72-101/201/211	74	Three Type I and One paired Type III exits	Demo	One Type I forward and One paired Type I aft.
AIRBUS				
A300	345*	Three pair Type A and one pair Type I exits	Analysis	Dual aisle interior configuration
A310	265	Two pair Type A and one pair Type I exits	Demo	Dual aisle interior configuration
A319	145	Two pair Type I and one pair Type III exits	Analysis	
A320	179	Two pair Type I and two pair Type III exits	Demo	
A321	220	Two pair Type I and two pair Type C exits	Analysis	Door 2 and/or door 3 may be derated to Type III
A330-200	375	Three pair Type A and one pair Type I exits	Analysis	
A330-300	379	Four pair Type A doors	Analysis	
A340-200	375	Three pair Type A and one pair of Type I exit **OR** four pair Type A exits	Analysis	
A340-300	379	Four pair Type A exits	Analysis	
BOEING				
707-100	189*	Two pair Type I and two pair Type III exits	Refer to footnote[2]	
707-300	189*	Two pair Type I and two pair Type III exits	Refer to footnote[2]	
717-200	134	One pair Type I and two pair Type III Tail exits		
720-048	149*	Two pair Type I and one pair Type III exits	Refer to footnote[2]	

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AIRPLANE MANUFACTURER AND MODEL	PAX[1] CAP.	EXIT CONFIGURATION	METHOD[2] OF COMPLIANCE	NOTES ON[3] SPECIAL FEATURES
727-100	119	One pair Type I, one pair Type III, and one pair Type IV exits	Refer to footnote[2]	
727-100	129*	One pair Type I, one pair Type III, one pair Type IV exits, and ventral stair with emergency extension system	Refer to footnote[2]	
BOEING (CONT'D)				
727-200	189*	Two pair Type I and two pair Type III exits	Analysis	Analysis is based on previous demonstrations and analyzed to 189
737-100	124	Two pair Type I and one pair Type III exits	Analysis	Analysis based on 737-200 demo, and reconfirmed by 737-300 demo
737-200	136	Two pair Type I and one pair Type III exits	Analysis	Analysis based on evacuation of 130 passengers plus 5% and reconfirmed by 737-300 demo
737-300	149*	Two pair Type I and one pair Type III exits	Demo	
737-400	188	Two pair Type I and one pair Type III exits	Demo	
737-500	140	Two pair Type I and one pair Type III exits	Analysis	
737-600/700	149	Two pair Type I and one pair Type III exits	Analysis	
737-800/900	189	Two pair Type I and two pair Type III exits	Analysis	
747-100, -200,SR	550*	Five pair Type A exits	Analysis	Dual aisle interior configuration, analysis based on demonstration
747SP	400	Four pair Type A exits	Analysis	Dual aisle interior configuration
The upper deck capacities for the 747-100, -200, SR, and SP airplanes are listed below. These capacities are not in addition to that of the main deck; they represent that portion of the main deck capacity that can occupy the upper deck during takeoff and landing.				
	8*	One exit and slide	Demo	Circular or straight stair
	116*	One exit and improved slide	Demo	Circular or straight stair

* [1, 2, 3] Refer to footnotes at end of table

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AIRPLANE MANUFACTURER AND MODEL	PAX[1] CAP.	EXIT CONFIGURATION	METHOD[2] OF COMPLIANCE	NOTES ON[3] SPECIAL FEATURES
BOEING (CONT'D)				
	32*	Two Type I exits and 25 knot slides	Analysis	Special Condition 25-61-NW-1 contains additional requirement. Contact the Seattle Aircraft Certification Office (SACO) for information on these requirements.
	45*	Two Type I exits and 25 knot slides	Analysis	Special Condition 25-71-NW-3 contains additional requirements that must be complied with. Contact the SACO for information on these requirements.
747-300, -400	Main Deck 550*	Five pair Type A exits	Analysis	
	Upper Deck 110*	One pair Type I exit	Analysis	Upper deck capacity is in addition to the main deck capacity
747-400 Combi				As per approved delivery configuration
747 CARGO AIRPLANES The upper deck capacities for the 747 cargo airplanes are as follows:				
	3*	Cockpit hatch and sufficient descent reels for crew	Analysis	Crew members only
	8*	Cockpit hatch with descent reels and one exit with slide	Analysis	3 crew plus 5 persons per Exemption 1870 B (Issued by the Office of Flight Standards)
	19*	Two exits with 25 knot slides	Analysis	3 crew plus 19 passengers, and 1 flight attendant
	19*	Cockpit hatch with descent reels and two exits with 25 knot slides	Analysis	3 crew plus 19 persons (ref. 14 CFR part 121 § 121.583 except para. (8)), and 1 flight attendant
757-200	219*	Four pair Type I exits	Demo	
	224*	Three pair Type I and two pair Type III exits	Demo	
	239*	Three pair Type I and one pair Type B	Analysis	An improved Type I exit is known as a Type "B"
757-200PF	0			Limited to 2 flight deck crewmembers, 5 persons per Exemption No. 4808

* [1, 2, 3] Refer to footnotes at end of table

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AIRPLANE MANUFACTURER AND MODEL	PAX[1] CAP.	EXIT CONFIGURATION	METHOD[2] OF COMPLIANCE	NOTES ON[3] SPECIAL FEATURES
BOEING (CONT'D)				
757-300	275	Three pair Type C, one pair Type I, and two pair Type III	Demo	
	295	Two pair Type C, one pair Type B, one pair Type I, and two pair Type III	Analysis	
767-200	255*	Two pair Type A and one pair Type III exits	Demo	Dual aisle interior configuration
	290*	Two pair Type A and one pair Type III exits	Analysis	Dual aisle interior configuration
767-300	290*	Two pair Type A and two pair Type III exits	Analysis	Dual aisle interior configuration
	351	Four pair Type A	Demo	Dual aisle interior configuration
777-300	550	Five pair Type A	Demo/Analysis	Dual aisle interior configuration. For pax capacity above 500, the additional F/A must be positioned at 3L or 3R (overwing).
BRITISH AEROSPACE CORPORATION				
HS-748	52	Data to be added at next revision		
BAC-111	79	Data to be added at next revision		
BAC-111	89	One pair Type I, one pair Type III exits, and verbal stair exit shown in BAC Mod. No. 52-PM2508		Data to be added at next revision
BAE-146-100	90	Two pair Type I exits	Demo	Maximum seating capacity of 109 approved for -100 and -200 with two pairs of Type I exits by Exemption 3639
BAE-146-200, -300	108	Two pair Type I exits	Demo	
BAE-4100	30			
CANADAIR				
CL-600-2B19 (Regional Jet)	50	One pair Type I and one pair Type III exits	Demo	Demo performed with one flight attendant
CL-600-2C10	78	One pair Type I and one pair Type III exits	Demo	Demo performed with two flight attendants
CARAVELLE				

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AIRPLANE MANUFACTURER AND MODEL	PAX[1] CAP.	EXIT CONFIGURATION	METHOD[2] OF COMPLIANCE	NOTES ON[3] SPECIAL FEATURES
S210	90	Other data not appropriate due to age of airplane		

* [1, 2, 3] Refer to footnotes at end of table

DEHAVILLAND				
DHC-7-100, -102	54	Data to be added at next revision		
DHC-7-101, -103	50	Data to be added at next revision		In combi configuration
DHC-8-100/200	40	One pair Type I, one pair Type III	Demo	When fitted with an approved interior
DHC-8-300	56	One pair Type I, one pair Type III	Demo	When fitted with an approved interior. May have extra Type I in aft fuselage if S.O.O. 8147 incorporated.
DHC-8-400	68	One Type I left fwd, one Type II/III right fwd, one pair Type I rear	Analysis	When fitted with an approved interior
DHC-8-401	70	One Type I left fwd, one Type II/III right fwd, one pair Type I rear	Analysis	When fitted with an approved interior
DHC-8-402	78*	One Type I left fwd, one Type II/III right fwd, one pair Type I rear	Demo	When fitted with an approved interior
FAIRCHILD				
F227	48	Data to be added at next revision		
FOKKER				
F.27 mk. 100, 200, 300, 400, 600, 700	48	One pair Type I and one pair Type IV	Demo and Analysis	1) RH rear exit is demonstrated equivalent to a Type I exit 2) Underwing exits are demonstrated equivalent to Type IV exits
F.27 mk. 500	60	Same as other mk's	Demo and Analysis	Same as other mk's
F.28 mk. 1000, 3000	65	One pair Type I and one pair Type III	Demo	70 pax after incorporation of Service Bulletin
F.28 mk. 2000	79*	One pair Type I and one pair Type III	Supp. demo based on demo for 65 pax.	
F.28 mk. 4000	85	One pair Type I and two pair Type III	Demo	
LOCKHEED				

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AIRPLANE MANUFACTURER AND MODEL	PAX[1] CAP.	EXIT CONFIGURATION	METHOD[2] OF COMPLIANCE	NOTES ON[3] SPECIAL FEATURES
L188	99	Other data not appropriate due to age of airplane		
L1011-385-1	362	Three pair Type A and one pair Type I exits	Analysis	Dual aisle interior configuration, 345 passengers were demonstrated
L1011-385-1	400	Four pair Type A exits	Demo	Demonstrated with 10 flight attendants in lieu of the minimum 8 required, dual aisle interior configuration
L1011-385-3 (L1011-500)	315	Three pair Type A exits	Analysis	Dual aisle interior configuration
MCDONNELL-DOUGLAS				
DC-6	82	Other data not appropriate due to age of airplane		
DC-7	91	Other data not appropriate due to age of airplane		

* [1, 2, 3] Refer to footnotes at end of table

MCDONNEL-DOUGLAS (CONT'D)				
DC-8 Basic	189	Two pair Type I and two pair Type III exits The DC-9-80 Series includes: DC-8-11, DC-8-12, DC-8-21, DC-8-31, DC-8-32, DC-8-33, DC-8-41, DC-8-42, DC-8-43, DC-8-51, DC-8-52, DC-8-53, DC-8-55, DC-8-62**, and DC-8-72**		Demo not required by CAR 4b
DC-8F	214	Three pair Type I and two pair Type III exits The DC-8F Series includes: DC-8F-54, DC-8F-55, DC-8-62F, and DC-8-72F	Analysis	
DC-8-60	269	Four Type I and two Type III exit pairs The DC-8-60 Series includes: DC-8-61, DC-8-61F, DC-8-63, DC-8-63F, DC-8-71, DC-8-71F, and DC-8-73, DC-8-73F	Demo	Five percent increase is not possible due to the method used to conduct the demonstration. Contact Los Angeles Aircraft Certification Office for details

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AIRPLANE MANUFACTURER AND MODEL	PAX[1] CAP.	EXIT CONFIGURATION	METHOD[2] OF COMPLIANCE	NOTES ON[3] SPECIAL FEATURES
DC-9-10/20	79	One pair Type I and one pair Type III exits		Demo not required by CAR 4b. Assist rope installed at tailcone, add 5 if inflatable slides are installed at the Type I exit pair.
	94	One pair Type I and one pair Type III exits The DC-9-10/20 Series includes: DC-9-11, DC-9-12, DC-9-13, DC-9-14, DC-9-15, DC-9-15F, and DC-9-21		Tailcone exit must comply with exemption 424; Contact Los Angeles Aircraft Certification Office (LAACO) for details. Add 5 if inflatable slides are installed at Type I exit pair.
MCDONNEL-DOUGLAS (CONT'D)				
DC-9-10/20/30 Series	109	One pair Type I and two pair Type III exits The DC-9-10/20/30 Series includes: DC-9-11, DC-9-12, DC-9-13, DC-9-14, DC-9-15, DC-9-15F, DC-9-21, DC-9-32, DC-9-32F, DC-9-33F, DC-9-34, and DC-9-34F		Demo not required by CAR 4b. Assist rope installed at tailcone, add 5 if inflatable slides are installed at the Type I exit pair; aft Type IV qualification; Contact LAACO for details.
DC-9-30	127	One pair Type I and two pair Type III exits The DC-9-30 Series includes: DC-9-31, DC-9-32, DC-9-32F, DC-9-33F, DC-9-34, and DC-9-34F	Demo	Tailcone exit must comply with 14 CFR part 25 § 25.807(c)(4)(ii); aft Type III exit pair may be limited to Type IV qualification; contact LAACO for details.
DC-9-41	128	One pair Type I and two pair Type III exits	Demo	Tailcone exit must comply with 14 CFR § 25.807(c)(4)(ii); aft Type III exit pair may be limited to Type IV qualifications; contact LAACO for details.

* [1, 2, 3] Refer to footnotes at end of table

**McDonnell-Douglas delivered to United Airlines a configuration of the DC-8-62 (or DC-8-72) with an extra pair of Type I exits. This configuration is equivalent to the DC-8-62F (of DC-8-72F) and therefore has a capacity of 214.

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AIRPLANE MANUFACTURER AND MODEL	PAX[1] CAP.	EXIT CONFIGURATION	METHOD[2] OF COMPLIANCE	NOTES ON[3] SPECIAL FEATURES
DC-9-51	139*	One pair Type I and two pair Type III exits	Demo	Tailcone exit must comply with 14 CFR § 25.807(c)(4)(ii); aft Type III exit pair may be limited to Type IV qualification; contact LAACO for details.
DC-9-80	172*	Two pair Type I and two pair Type III exits The DC-9-80 Series includes: DC-9-81 (MD-81), DC-9-82 (MD-82), and DC-9-83 (MD-83)	Demo	Tailcone exit must comply with 14 CFR letter to Douglas dated 11/16/77; contact LAACO for details.
DC-10	345	Three pair Type A and one pair Type I exits The DC-10 Series includes: DC-10-10, DC-10-10F, DC-10-15, DC-10-30, DC-10-30F, and DC-10-40	Demo	Dual aisle interior configuration

* [1, 2, 3] Refer to footnotes at end of table

MCDONNEL-DOUGLAS (CONT'D)				
DC-10	380	Three pair Type A exits and one pair improved Type I exit with a 36-inch passageway leading to exits, double-lane slides, and two flight attendant assist spaces each at doors 1L and 1R.	Demo	Dual aisle interior configuration, an improved Type I exit is known as a Type "B," contact LAACO for additional details concerning this configuration; reference Exemption 1573.
MD-11	410	Three pair Type A exits, and one pair improved Type I exit with 36-inch passageway leading to exits, double-lane slide/ rafts, and flight attendant assist spaces at all doors.	Analysis/ Platform Demo	Dual aisle interior configuration, an improved Type I exit is known as a Type "B," Special flight attendant training requirements for seating capacity above 381. Contact LAACO and LGB-AEG for details concerning this configuration.
NIPPON				
YS-11	59	Data to be added at next revision		Add 5 if two inflatable slides are installed
VICKERS				
VC 745 D	51	Other data not appropriate due to age of airplane		

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AIRPLANE MANUFACTURER AND MODEL	PAX[1] CAP.	EXIT CONFIGURATION	METHOD[2] OF COMPLIANCE	NOTES ON[3] SPECIAL FEATURES
VC 800	72	Other data not appropriate due to age of airplane		

* [1, 2, 3] Refer to footnotes at end of table

FOOTNOTES

[1] An asterisk (*) beside a passenger capacity value indicates that the capacity is restricted by the exit rating limit and no increase is allowed without a change to the number and/or type of exits used.

[2] The method of compliance indicates whether the capacity was approved based on the conduct of a full-scale evacuation demonstration (demo) or an analysis. An analysis is based on a previous full-scale demo and/or other test that validate the analysis. In the case of airplanes with a certification basis of Civil Air Regulations (CAR) 4b, such as the Boeing 727, neither demonstration nor analysis is required. In these cases, certain criteria of 14 CFR § 25.2 may be applicable for increases in passenger capacities; either the Seattle or Los Angeles Aircraft Certification Office should be contacted for details.

[3] This table and these notes describe special features pertinent to the listed passenger capacities. They may not represent all of the unique factors affecting the passenger capacities and interior configurations of the listed airplane models. For this reason, aircraft certification engineering personnel should be consulted, through either the Seattle Aircraft Evaluation Group, SEA AEG (425) 227-2280 and FAX: (425) 227-1270, or the Long Beach Aircraft Evaluation Group, LGB AEG (562) 627-5272 and FAX: (562) 627-5281, prior to approving a change to either the passenger capacity or interior configuration.

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